

Serial No.: 10/550,835  
Examiner: S. Cattungal  
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REMARKS

Reconsideration is requested in view of the above amendments and the following remarks. Applicants appreciate the courtesy shown by the Examiner in discussing this application with the Applicants' representative R. Christine Yang on March 12 and 27, 2008 respectively. The above amendments and the following remarks reflect the substance of the discussion. Claims 9 and 13-17 have been editorially revised. Support for the revisions can be found at page 6, lines 18-20 of the specification, among other places. No new matter has been added. Claims 9-17 remain pending in the application.

Claim 9 has also been revised to clarify that the relay ground substrate acts as a conductive substrate. Support for this revision can be found at page 10, lines 14-16 of the specification.

Claim Rejections - 35 USC § 102

Claims 9-17 are rejected under 35 USC § 102(e) as being anticipated by Frey (US 6,100,626). Applicants respectfully traverse this rejection.

Claim 9 requires a sensor ground substrate and a cable substrate be connected directly or via a relay ground substrate as a conductive substrate. In one example, the sensor ground substrate connected from the piezoelectric element can be connected directly to the cable substrate. In another example, the sensor ground substrate can be connected or, in another word, relayed to the ground of the cable substrate by a relay ground substrate. This arrangement helps reduce the ground resistance between the sensor ground substrate and the ground of the cable substrate, and thus helps reduce a noise current flow through the ground due to ground potential difference. This would help reduce the image noise and improve the quality of the image obtained (see the paragraph bridging pages 2 and 3 and page 3, lines 6-10 of the specification, among other places).

Frey et al. fail to disclose that a sensor ground substrate and a cable substrate be connected directly or via a relay ground substrate as a conductive substrate, as required by claim 9. Instead, Frey et al. discuss a system for connecting signal lines to a coaxial

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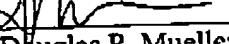
cable in an ultrasound probe (see Frey et al., Abstract and Fig. 3). Specifically, the conductive traces 18 that are connected to the conductive traces 24 of the cable 30 at the overlap region X as shown in Figs. 3 and 4 are merely signals lines from the piezoelectric transducer element, because they are connected to the signal electrode of the piezoelectric transducer element (see Frey et al, col. 3, lines 6-8; see also col. 2, line 66 to col. 3, line 20 and Figs. 3 and 4). Frey et al. are completely silent as to a sensor ground substrate being connected to a cable substrate as required by claim 9. As shown in Fig. 3, the ground line of the cable 30 in Frey et al. clearly does not suggest the structure of claim 9.

For at least these reasons, claim 9 is patentable over Frey et al. Claims 10-17 ultimately depend from claim 9 and are patentable along with claim 9 and need not be separately distinguished at this time. Applicants are not conceding the relevance of the rejection to the remaining features of the rejected claims.

In view of the above, favorable reconsideration in the form of a notice of allowance is respectfully requested. Any questions regarding this communication can be directed to the undersigned attorney, Douglas P. Mueller, Reg. No. 30,300, at (612) 455-3804.

Respectfully submitted,

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Dated: July 3, 2008

DPM/cy

